New and Renewable Energy is providing interest subsidy on upfront basis so that loans at an effective interest rate of 2% are available to the domestic users from various banks and Financial Institutions.

Solar energy generation

3639. SHRI N.R. GOVINDARAJAR: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) the quantum of solar energy generated in the country, as on date;

(b) whether Government proposes to give priority to solar energy over hydro and thermal power, as the cost of production of solar energy is very less;

(c) if so, the details thereof;

(d) the fund allocated to each state to popularize solar energy during the last three years; and

(e) the details of manufacturers of solar energy systems in each State, as on date?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI VILAS MUTTEMWAR): (a) to (c) Solar energy can be harnessed through two routes, namely solar photovoltaic (PV) and solar thermal. In photovoltaic route, it is directly converted to electricity while in solar thermal route it is first converted into heat and then to electricity.

A total of 33 grid interactive solar photovoltaic power plants have been installed in the country with financial assistance from the Ministry. These plants, with aggregate capacity of 2.125 Megawatt peak (MWp), are estimated to generate about 2.5 million units of electricity in a year.

In addition, the solar energy systems are being used for stand-alone applications in lighting, telecommunication, small power requirements, battery charging, water heating and cooking etc. So far around 14.5 lakh solar photovoltaic systems aggregating to about 125 Megawatt peak solar photovoltaic module capacity have been installed in the country. Further, about 6.15 lakh solar cookers and about 23 lakh square metre collector area has been installed for solar water heating applications, which is equivalent to about 1600 Megawatt thermal capacity.

The utilization of solar energy in the country is regularly increasing, however, the high initial cost of the solar energy systems is a barrier in its large-scale utilization. The estimated cost of electricity from grid connected solar energy plant is around Rs. 12-15 per unit, which is high compared to electricity generated from conventional sources including thermal power and other renewable energy sources such as wind, small hydro and biomass.

Recently, a new demonstration scheme has been announced by the Ministry to provide generation based incentive for MW-capacity grid interactive solar power projects in the country.

(d) The details of state-wise release of funds during the last three years for various solar energy programmes are given in Statement-I (*See* below).

(e) The State-wise details of manufacturers of solar photovoltaic (SPV) cells/modules, flat plate collector (FPC) and evacuated tube collector (ETC) based solar water heating systems and solar cookers are given in Statement-II.

Statement-I

State-wise release of Funds for Solar Energy Programmes during last three years

(Rs. in lakhs)

States & UTs	Financial Year 2005-06	2006-07	2007-08
Andhra Pradesh	49.8	44.2	42.00
Arunachal Pradesh	34.81	280.6	199.14
Assam	50	0	147.41
Bihar	9.12	22.95	25.94
Chandigarh	0.08	0	3.83
Chhattisgarh	14.16	47.7	25.94
Delhi	17.5	8.5	16.40
Goa	0	13.25	1.68
Gujarat	36.97	280.59	95.15
Himachal Pradesh	1.77	505.62	123.52
Haryana	165.78	355.32	401.15
Jammu & Kashmir	3.2	210.33	248.17
Jharkhand	5.91	0	0
Karnataka	326.35	312.23	29.42
Kerala	74.54	0	5.72
Madhya Pradesh	3	129.01	2.02
Maharashtra	107.97	270.88	1045.49
Manipur	24.98	15.95	10.82
Meghalaya	154.76	424.76	493.21
Mizoram	110.71	100.9	97.35
Nagaland	6.98	94.9	0
Orissa	2.26	76.48	0.32
Pondicherry	5.09	2	4.80
Punjab	11.8	62.9	184.98
Rajasthan	246.16	396.82	411.87
Sikkim	0	110.14	111.44
Tamil Nadu	107.23	253.27	11.08
Tripura	1.71	0	109.98
Uttar Pradesh	174.99	171.85	85.29
Uttarakhand	273.23	1246.33	573.03
West Bengal	325.81	341.78	397.50
IREDA/Banks/Others	3465.76	1706.03	2708.30
TOTAL:	5812.43	7485.31	7701.30

Statement-II

State-wise Manufacturers of Solar Photovoltaic Cells/Modules, Solar Water Heaters and Solar Cookers

Sl. No.	State	Solar Cells	SPV Modules	FPC based solar water heaters	ETC based solar water heaters	Box type solar cookers	Concentrating solar cookers
1.	Andhra Pradesh	1	6	5	3		1
2.	Gujarat			4	2	5	3
3.	Haryana				1		
4.	Himachal Pradesh			1			
5.	Karnataka	3	6	27	8		4
6.	Karela		1		3		1
7.	Madhya Pradesh					1	1
8.	Maharashtra		1	15	13		4
9.	Punjab		1	2		1	
10.	Rajasthan		1				1
11.	Tamil Nadu	2	2	3	3		1
12.	Uttar Pradesh	2	2			2	1
13.	Uttrakhand			1			
14.	West Bengal	1	1		2	1	
15.	Delhi			1	8	1	4
	TOTAL:	9	21	59	43	11	21

Harnessing solar energy

3640. SHRI S. ANBALAGAN: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether it is a fact that the country is very far behind the advanced countries in harnessing the solar energy;

(b) if so, the details of India's position as compared to USA, Japan, Germany and China;

(c) the amount allocated for development of this sector during each of the last three years and the amount spent and the achievements made therefrom;

(d) whether Government proposes to initiate any new steps to harness the solar energy effectively; and

(e) if so, the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI VILAS MUTTEMWAR): (a) and (b) Solar Energy can be harnessed through two